

**UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

KAIFI LLC,

Plaintiff,

v.

T-MOBILE US, INC.; LAYER3 TV, INC.;  
L3TV DALLAS CABLE SYSTEM, LLC;  
METROPCS TEXAS, LLC; T-MOBILE  
LICENSE LLC; T-MOBILE USA, INC.; T-  
MOBILE WEST LLC; T-MOBILE WEST  
TOWER LLC; IBSV LLC; THEORY  
MOBILE, INC.; T-MOBILE PCS HOLDINGS  
LLC; T-MOBILE RESOURCES  
CORPORATION; and T-MOBILE  
SUBSIDIARY IV CORPORATION

Defendants.

Case No. 2:20-CV-281

JURY TRIAL DEMANDED

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff KAIFI LLC (“Plaintiff” or “KAIFI”) hereby alleges infringement of United States Patent No. 6,922,728 (“the ’728 Patent”) against Defendants T-Mobile US, Inc. (“T-Mobile US”); Layer3 TV, Inc. (“Layer 3 TV”); L3TV Dallas Cable System, LLC (“L3TV Dallas”); MetroPCS Texas, LLC (“MetroPCS Texas”); T-Mobile License LLC (“T-Mobile License”); T-Mobile USA, Inc. (“T-Mobile USA”); T-Mobile West LLC (“T-Mobile West”); T-Mobile West Tower LLC (“T-Mobile Tower”); IBSV LLC (“IBSV”); Theory Mobile, Inc. (“Theory”); T-Mobile PCS Holdings LLC (“T-Mobile PCS”); T-Mobile Resources Corporation (“T-Mobile Resources”); and T-Mobile Subsidiary IV Corporation (“Subsidiary IV”); (collectively, “Defendants” or “T-Mobile”) as follows:

## **THE PARTIES**

1. Plaintiff KAIFI is a corporation organized and existing under the laws of the State of Texas, having a principal place of business at 405 State Highway 121, Lewisville, Texas 75067.

2. Defendant T-Mobile US is a corporation organized and existing under the laws of the State of Delaware, with a principal place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant T-Mobile US may be served with process through its registered agent at Corporation Service Company, 251 Little Falls Drive, Wilmington DE 19808.

3. Defendant Layer 3 TV is a corporation organized and existing under the laws of the State of Delaware, with a principle place of business at 1660 Wynkoop Street, Suite 800 Denver, CO 80202. Defendant Layer 3 TV may be served with process through it registered agent at Corporation Service Company., 251 Little Falls Drive, Wilmington, Delaware 19808.

4. Defendant L3TV Dallas is a limited liability company organized and existing under the laws of the State of Delaware, with a principle place of business at 1660 Wynkoop Street, Suite 800 Denver, CO 80202. Defendant L3TV Dallas may be served with process through it registered agent at Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

5. Defendant MetroPCS Texas is a limited liability company organized and existing under the laws of the State of Delaware, with a principle place of business at 8144 Walnut Hill Ln., Suite 800, Dallas, TX 75231. Defendant MetroPCS Texas may be served with process through it registered agent at Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

6. Defendant T-Mobile License is a limited liability company organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant T-Mobile License may be served with process through it

registered agent at Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

7. Defendant T-Mobile USA is a corporation organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant T-Mobile USA may be served with process through its registered agent at Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

8. Defendant T-Mobile West is a limited liability company organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant T-Mobile West may be served with process through its registered agent at Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

9. Defendant T-Mobile Tower is a corporation organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant T-Mobile Tower may be served with process through its registered agent at Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

10. Defendant IBSV is a corporation organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant IBSV may be served with process through its registered agent at Corporation Service Company, 251 Little Falls Drive, Wilmington Delaware 19808.

11. Defendant Theory is a corporation organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant Theory may be served with process through its registered agent at Corporation Service Company, 251 Little Falls Drive, Wilmington Delaware 19808.

12. Defendant T-Mobile PCS is a limited liability company organized and existing

under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant T-Mobile PCS may be served with process through its registered agent at Corporation Service Co., 251 Little Falls Drive, Wilmington, Delaware 19808.

13. Defendant T-Mobile Resources is a corporation organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant T-Mobile Resources may be served with process through its registered agent at Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

14. Defendant Subsidiary IV is a corporation organized and existing under the laws of the State of Delaware, with a principle place of business at 12920 SE 38th Street, Bellevue, WA 98006. Defendant Subsidiary IV may be served with process through its registered agent at Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

15. Upon information and belief, Defendant T-Mobile US is the parent corporation of Defendants Layer 3 TV, L3TV Dallas, MetroPCS Texas, T-Mobile License, T-Mobile USA, T-Mobile West, T-Mobile Tower, IBSV, Theory, T-Mobile PCS, T-Mobile Resources, and Subsidiary IV. Defendants have regular and established places of business throughout Texas and the Eastern District of Texas, including at 516 E. Front Street, Tyler, TX 75702; 222 E End Boulevard S., Suite C, Marshall, TX 75670; 302 S Mobberly Avenue, Longview, TX 75602; and 107 N Timberland Drive, Lufkin, TX 75901.

#### **JURISDICTION; VENUE; JOINDER**

16. This action arises under the patent laws of the United States, Title 35 of the United States Code (“U.S.C.”) § 101 *et seq.*

17. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331, 1332, and 1338(a).

18. Defendants are subject to this Court’s specific and general personal jurisdiction

consistent with the principles of due process and/or the Texas Long Arm Statute.

19. Defendants are registered with the Secretary of State to do business in the State of Texas. Defendants sell and offer to sell products and services throughout the State of Texas, including in this judicial district, and introduce infringing products and services into the stream of commerce knowing that they would be sold in the State of Texas and this judicial district.

20. Personal jurisdiction exists generally over Defendants because each Defendant has sufficient minimum contacts with the forum as a result of business conducted within the State of Texas and the Eastern District of Texas. Personal jurisdiction also exists over each Defendant because it, directly or through subsidiaries or intermediaries, makes, uses, sells, offers for sale, imports, advertises, makes available, and/or markets products within the State of Texas and the Eastern District of Texas that infringe one or more claims of the '728 Patent, as alleged more particularly below.

21. Venue in this District is proper under 28 U.S.C. §§ 1400(b) and 1391(b)–(c) because each Defendant is subject to personal jurisdiction, resides and/or has a regular and established place of business, and has committed acts of infringement in this District. Each Defendant makes, uses, sells, offers to sell, and/or imports infringing products into and/or within this District, maintains a permanent and/or continuing presence within this District, and has the requisite minimum contacts with this District such that this venue is a fair and reasonable one. Upon information and belief, each Defendant has transacted and, at the time of the filing of the Complaint, is continuing to transact business within this District.

22. Defendants are properly joined under 35 U.S.C. § 299(a)(1) because, as set forth in greater detail below, Defendants commonly and/or jointly make, use, sell, offer to sell, and/or import infringing instrumentalities, such that at least one right to relief is asserted against

Defendants jointly, severally, and in the alternative with respect to the same transactions, occurrences, or series of transactions or occurrences relating to the making, using, selling, offering to sell, and/or importing into the United States the same accused instrumentalities, as set forth in greater detail herein.

23. Defendants are properly joined under 35 U.S.C. § 299(a)(2) because, as set forth in greater detail below, Defendants make, use, sell, offer to sell in, and/or import into the United States the same or similar accused instrumentalities, such that questions of fact that are common to all Defendants will arise, as set forth in greater detail herein.

24. The '728 Patent was the subject of a prior litigation in this District, *in KAIFI LLC v. AT&T Inc., et al.*, Case No. 2:19-cv-00138-JRG (E.D. Tex.), making this action a “related” case under this District’s Local Patent Rule 2-6.

### **BACKGROUND**

25. The '728 Patent, entitled “Optimal Internet Network Connecting and Roaming System and Method Adapted for User Moving Outdoors or Indoors,” issued on July 26, 2005 to the Korea Advanced Institute of Science & Technology (“KAIST”), one of South Korea’s premier research universities. A true and correct copy of the '728 Patent is attached hereto as Exhibit A.

26. KAIST was founded in 1971 as Korea’s first research-oriented science and engineering institution, has over 9,000 students and 1,100 faculty researchers, and holds more than 3,300 registered patents worldwide. KAIST has ranked 1st in Korea and 21st in the world for engineering and information technologies. In 2017, Thomson Reuters named KAIST as the 6th most innovative university in the world. The *Times Higher Education* ranked KAIST as the 3rd best university in the world under 50 years old.

27. Plaintiff KAIFI is an intellectual property consulting company that promotes and

manages intellectual property directed to telecommunications technologies, which are developed by Korean research institutes and universities, such as KAIST. KAIFI owns by assignment all right, title, and interest in and to the '728 Patent, including the right to all remedies for past and ongoing infringement thereof, and thus has standing to sue for infringement.

28. The sole inventor of the '728 Patent is Dong-Ho Cho, who is currently a professor of electrical engineering at KAIST. Prof. Cho has been the Dean of the College of Information Science & Technology at KAIST, served as the director of KAIST's Wireless Power Transfer Technology Research Center, served as an advisor to the Korean Ministry of Information and Communication from 2003 to 2007, and heads the LG-KAIST 6G Research Center.

29. Prof. Cho is the named inventor on over 70 U.S. patents and hundreds of patents worldwide, and is the author of numerous technical publications. His patents and publications have been cited over 8,000 times. He has conducted research into network interconnection technologies and integration of packet-based voice and data terminals with cellular mobile networks since the late 1980s. He has been recognized as a leading scholar on wireless communications, including next-generation "5G" mobile networks.

30. Prof. Cho and his research have been recognized with numerous distinctions. For example, the Republic of Korea awarded Prof. Cho a Presidential Citation and the Red Stripes Order of Service Merit, for his contributions to the fields of advanced mobile communications and wireless technologies. The Korean Institute of Communications and Information Sciences has recognized and awarded Prof. Cho for his contributions. The Korean newspaper, *Dong-a Ilbo*, named Prof. Cho as among Korea's 100 leading pioneers.

31. The '728 Patent is directed to an Internet network connecting and roaming system and method. The '728 Patent provides significant benefits and solutions. For example, with the

patented invention, voice and data communications may be seamlessly transitioned to a Wi-Fi network from an LTE network. This reduces load and congestion on cellular networks, reduces network costs, and increases voice and data communication coverage quality and range.

32. In April 2019, KAIFI filed suit on the '728 Patent against various AT&T entities in *KAIFI LLC v. AT&T Inc. et al.*, Case No. 2:19-cv-00138-JRG ("AT&T Case"). The Court issued a claim construction order on April 17, 2020. Trial was scheduled for September 14, 2020. The AT&T Case was dismissed on August 8, 2020 subject to the terms of a written settlement agreement.

### **T-MOBILE ADOPTS THE '728 PATENT TECHNOLOGY**

33. Defendants provide wireless network and system instrumentalities that enable seamless voice and data communication services, including Defendants' Wi-Fi Calling, and, on information and belief, other reasonably similar services from Defendants and third parties.

34. T-Mobile first introduced Wi-Fi Calling in or around 2007. According to T-Mobile, "T-Mobile is pioneering a seamless handover between our LTE network and any available Wi-Fi connection so calls don't drop between the two." T-Mobile also states that "Wi-Fi Calling allows customers to make and receive calls and texts (SMS & MMS) over a Wi-Fi connection. Using Wi-Fi Calling is easy—customers won't even know they're making a Wi-Fi call. Simply connect to an available Wi-Fi network with a Wi-Fi calling-enabled smartphone and continue to make a call or send a text as you would over a cellular connection. No separate app or log-in or number is needed." According to T-Mobile, its customers benefit from Wi-Fi Calling through:

- Integrated out-of-the-box experience on T-Mobile capable devices – no extra app necessary;
- Uses your existing phone number – no additional logins necessary;



- Call or message virtually anyone from anywhere you have a Wi-Fi connection;
- Extends coverage in areas where no cellular network reaches;
- Receive and make Wi-Fi calls back to the United States from anywhere in the world at no additional cost; and
- Available at no additional charge”

35. Wi-Fi Calling is included on most T-Mobile devices and T-Mobile provides instructions to customers on how to use Wi-Fi Calling. For example, the T-Mobile web-site provides instructions on how to enable and use Wi-Fi Calling.

### **THE ACCUSED INSTRUMENTALITIES**

36. The Accused Instrumentalities include systems, networks, and components and services thereto used and controlled by Defendants for implementing seamless network transition, including off-loading to a Wi-Fi network, such as through their Wi-Fi Calling system and service, and include both native and third-party, over the top (OTT) voice and data applications.

### **COUNT 1**

37. Each Defendant infringes at least claim 1 of the '728 Patent.

38. Each Defendant has committed and continues to commit acts of direct infringement by making, using, selling, offering to sell, and/or importing Accused Instrumentalities, including but not limited to instrumentalities comprising a wireless network and system, user mobile devices, Wi-Fi Calling service, internet service provisioning, and Wi-Fi access points and services, which include nationwide Wi-Fi hotspots.

39. Exhibit B details the manner in which the Accused Instrumentalities infringe the '728 Patent by way of a representative example that charts Defendants' Wi-Fi Calling. On

information and belief, the manner of infringement by all Accused Instrumentalities is materially the same as this representation.

40. Each Defendant has been and is indirectly infringing the '728 Patent by actively inducing the direct infringement by others of the '728 Patent, in the United States, the State of Texas, and this District.

41. Each Defendant has induced and continues to induce through affirmative acts customers and third parties, such as wireless subscribers and/or Internet service users, to directly infringe the '728 Patent under 35 U.S.C. § 271(b) by making, using, selling, offering for sale, and/or importing into the United States the Accused Instrumentalities.

42. Defendants infringe the '728 Patent by the creation and control of systems utilized by end users, including Defendant's direct customers and users who contract with Mobile Virtual Network Operators (MVNOs). Upon information and belief, per contractual agreements with Defendants, MVNOs market differently branded-virtual mobile network services to users, that are implemented and operated on and through Defendant's actual networks.

43. The mechanisms by which Defendants infringe the '728 Patent through MVNOs is provided in more detail in Exhibit B and at least a partial list of MVNOs through which T-Mobile infringes the '728 Patent is found in Exhibit C.

44. Defendants have actual notice of the '728 Patent and/or their infringing activities relating to the '728 Patent. On August 27, 2020, KAIFI provided T-Mobile with the '728 Patent and claim chart and offered to license the '728 Patent. T-Mobile MVNO, Google Fi has actual notice of the '728 Patent and/or their infringing activities relating to the '728 Patent. For example, Google Fi has been aware of the '728 Patent since at least September 3, 2015 when they were put on notice of infringement and/or offered a license to the '728 Patent.. Defendants

have been aware of the '728 Patent since at least the filing date of this complaint, when they were put on notice of infringement.

45. Each Defendant specifically intended and was aware that the ordinary and customary use of the Accused Instrumentalities would infringe the '728 Patent.

46. The affirmative acts of inducement by Defendants include, but are not limited to, any one or a combination of encouraging and/or facilitating third party infringement through the advertisement, marketing, and dissemination of the Accused Instrumentalities and their components, including via Defendants' wireless subscribers and/or internet service users; and creating and publishing promotional and marketing materials, supporting materials, product manuals, and/or technical support and information relating to the Accused Instrumentalities, including but not limited to Wi-Fi Calling and off-loading to a Wi-Fi network, which describe, train, and instruct users on the implementation of the Accused Instrumentalities and their components, including but not limited to mobile devices, Wi-Fi networks, and cellular networks.

47. Defendants knew that the induced conduct would constitute infringement, and intended said infringement at the time of committing the aforementioned acts, such that those acts and conduct have been and continue to be committed with the specific intent to induce infringement, or to deliberately avoid learning of the infringing circumstances at the time these acts were committed, so as to be willfully blind to the infringement they induced.

48. Defendants took active steps to encourage end users to use and operate the Accused Instrumentalities, including but not limited to Wi-Fi Calling and off-loading to a Wi-Fi network, despite knowing of the '728 Patent in the United States, in a manner they knew directly infringes each element of at least claim 1 of the '728 Patent. Further, Defendants provided product manuals and other technical information that cause their subscribers, customers, and

other third parties to use and to operate the Accused Instrumentalities for their ordinary and customary use, such that Defendants' customers and other third parties have directly infringed the '728 Patent, through the normal and customary use of the Accused Instrumentalities.

49. Therefore, each Defendant is liable for infringement of the '728 Patent and that infringement has been and continues to be willful in nature.

50. Plaintiff KAIFI has incurred and will continue to incur substantial damages.

51. Plaintiff KAIFI has been and continues to be irreparably harmed by each Defendant's infringement.

52. Therefore, Plaintiff KAIFI is entitled to an injunction, actual and/or compensatory damages, reasonable royalties, pre- and post-judgment interest, enhanced damages, attorney fees, and costs.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff KAIFI respectfully requests that this Court:

A. Enter judgment in favor of Plaintiff KAIFI that the '728 Patent is valid and enforceable;

B. Enter judgment in favor of Plaintiff KAIFI that each Defendant has infringed and continues to infringe the '728 Patent, and find that such infringement is willful;

C. Award Plaintiff KAIFI all monetary relief available under the laws of the United States, including but not limited to 35 U.S.C. § 284;

D. Order each Defendant to pay ongoing royalties in an amount to be determined for any continued infringement after the date that judgment is entered;

E. Declare this case exceptional and award Plaintiff KAIFI its reasonable attorney fees under 35 U.S.C. § 285;

F. Enjoin each Defendant, and its officers, subsidiaries, agents, servants, and

employees, and all persons in active concert with any of the foregoing, from further infringement of the '728 Patent; and

G. Grant Plaintiff KAIFI all such other relief as the Court deems just and equitable.

**DEMAND FOR JURY TRIAL**

Plaintiff KAIFI demands a jury trial on all issues so triable pursuant to Rule 38 of the Federal Rules of Civil Procedure.

Date: August 28, 2020

Respectfully submitted,

/s/ Robert Christopher Bunt

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